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BULLETIN
OF THE
TORREY BOTANICAL CLUB

FEBRUARY, 1914

The ferns and flowering plants of Nantucket—XII

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CACTACEAE

OPUNTIA.

In the history of Nantucket botany this cactus bears the distinction of having been the first one of the island's plants to receive formal botanical mention and published record. We do not know that it was ever seen on Nantucket by civilized man prior to its discovery there by Mr. Thomas A. Green, of New Bedford, on whose authority it was announced as a Nantucket plant as long ago as 1833 by Professor Edward Hitchcock in his "Report on the Geology, Mineralogy, Botany and Zoology of Massachusetts." Other plants of Nantucket find record in the same work but the prickly pear, under the name *Cactus Opuntia* L., has priority of place, thus, eighty years ago, marking the starting point of exact Nantucket botany.

On Nantucket this cactus is at the extreme northeastern limit of its range and is native only on that long arm of sand known as Coatue, which reaches along the western side of the harbor protecting it from Nantucket Sound. It abounds there in sandy openings among the low red cedars taking so strong a growth as to form close assurgent clusters sometimes three to five feet across.

Only once have I seen it there when it was in full bloom, on July 13, 1912. Its flowers were in great profusion, and one plant of three and a half feet spread bore about 220 blossoms. The flowers are bright yellow with a conspicuous red center and are

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6.3–7.5 cm. across, pressing out to as much as 9.5 cm.; petals 8–12, mucronate, 2.5–3.2 cm. wide; cluster of stamens 3.8–4.5 cm. in natural spread. The red center of the flower is patterned as a star, its rays tapering out beyond the stamens along the midveins of the petals. Larger stems, 10.5 dm. long, may bear as many as thirty joints, these narrowly oblong to obovate, becoming 18 cm. long and 8 cm. wide, occasionally narrow and trigonous. Fruits often seven, sometimes nine, on one joint, marginal or one or more also lateral, mostly 3.75–4 cm. long, commonly narrowed from apex to base, when lateral sometimes 5.5 cm. long. Base of the plant bulbous, becoming woody and much enlarged; main root horizontal and greatly elongated; a root carefully excavated Sept. 7, 1904 was nine and a half feet in length.

Two species of cactus have been attributed to Nantucket doubtless with reference to the spiny and spineless plants found on Coatue. These are not to be regarded as other than forms or varieties of one species. They do indeed stand well apart in the one character of armature, and it is probably true that some plants always produce spines and that others never do. But the flowers of each are essentially the same, although a close comparison, made on the one occasion when the plants were found in bloom, makes it possible to say that those of the spiny form were quite generally a trifle the smaller with slightly narrower petals, and usually a little more color—the red a shade deeper and the yellow just perceptibly brighter. A very small proportion of the unarmed form bear a few spines, sometimes not more than one or two and only on a single one of the joints.

I have not used any specific name for this cactus believing that two distinct species of *Opuntia* belong to our eastern flora and that it will therefore need to be determined to which one the current names *Opuntia vulgaris* Mill. and *Opuntia Opuntia* (L.) Coult. properly belong. Among the rocky hills on Manhattan Island and beyond, near Van Cortlandt Park, and in Bronx Park, there grows a cactus which is to me not at all the same species as the sand inhabiting littoral plant found on Nantucket. It thrives on rocky knolls in hilly woodland, either quite exposed to the sun or in partial shade, and has smaller flowers, which are light yellow throughout with never the faintest tinge of red, as I

have observed it. It is a smaller plant than the Nantucket species with shorter and more rounded joints of a duller green color and I have never seen on it even the rudiment of a spine nor observed that it ever developed a bulbous woody base or greatly elongated roots. It is also of more prostrate habit than the Nantucket plant.

LYTHRACEAE

DECODON VERTICILLATUS (L.) Ell.

No aquatic plant of Nantucket grows up in a greater number of ponds and bog holes than the swamp loosestrife and where it gets a footing it slowly pushes into undisputed possession of the places it chooses to occupy. It is the only shrubby aquatic of the island's ponds, where it makes the outermost fringe of vegetation along many a bushy shore, its wandlike arching and recurving stems forming an airy embankment above the water. In the autumn its foliage becomes as brilliant as it is possible for leaves to be and encircles some of the smaller ponds with a zone of variegated scarlet. The Pout Ponds deep set among the hills make a memorable scene when thus emblazoned.

On Nantucket this plant seems to be always more or less pubescent, the upper part of the stem and the leaves beneath even densely tomentulose with branched or substellate often ferruginous hairs.

New shoots a few inches high May 30, 1909, and just noticeable June 3, 1911; in full flower Aug. 15, 1906.

LYTHRUM SALICARIA L.

Mrs. Owen's catalogue records "a few plants in danger of extinction near Long Pond." Today, twenty-five years later, a few plants are still to be found there. They grow close to the shore at the "Gut," where I first saw them Aug. 12, 1906, then passing out of bloom. It was in full flower July 10, 1912, and beautifully conspicuous from the bright rose-purple spikes borne by three separated groups of plants. On June 1, 1909, the tallest plants were about six inches high.

The Nantucket plant is the form having the upper stem and the leaves with the bracts and calyx densely white tomentulose—var. *tomentosum* (Mill.) DC.

MELASTOMACEAE

RHEXIA VIRGINICA L.

Common in sandy swamps and along pond shores. In fresh flower Aug. 12, 1906; continues to bloom into September. The leaves show considerable variation in form, from lanceolate-oblong and acute, to ovate or, on small plants, even quite orbicular.

ONAGRACEAE

ISNARDIA PALUSTRIS L.

Very common in muddy pond holes and ditches.

* *LUDWIGIA ALTERNIFOLIA* L.

Another one-locality plant of Nantucket. It was found Aug. 29, 1904, well established about one of the small ponds at Shimmo Valley farm, bearing abundant fruit and some late flowers.

* *CHAMAENERION ANGUSTIFOLIUM* (L.) Scop.

This tall herb, so conspicuous when in bloom from midsummer till autumn, is not included in Mrs. Owen's catalogue of 1888 although it had become frequent not many years later. It seems to have been first collected as far back as 1886 by Mrs. Cornelia L'Hommédieu near the Agricultural Grounds. Two years later it was found by Mrs. Owen in Polpis, and again, in 1892, by Mrs. Mabel P. Robinson. There is no record that it was anywhere common before 1895, when Mr. Dame reported it as abundant at Gibbs Swamp "appearing after an extensive brush fire," and Mr. Floyd found it well established on the "commons." For these records I am indebted to Mr. Floyd's manuscript notes. Today the plant is rather common, even locally abundant, on the eastern side of the island from Polpis and about Sauls Hills to Tom Nevers Swamp, and along the railroad in the southeast quarter. It does not yet appear to have spread into Shawkemo, Quaise, Pocomo or Squam. Further west it occurs at a few stations in the South Pasture, in Taupawshas Swamp, and near the state road not far beyond the town. On the western side of the island I have met with it near Miacomet Pond (1899), the "Woods" (1904), and Trots Swamp (1912). First flowers July 3, 1912; it sometimes continues to bloom until late in September.

A single plant with white flowers was found in Gibbs Swamp by Mr. Dame in 1895 (F. G. Floyd).

EPILOBIUM HIRSUTUM L.

Common in the lower parts of the town and out into the suburbs, often massed along ditches and in the corners of damp lots and low fields; also by the roadside in Shawkemo, the only place where I saw it far out from the town. Mr. Floyd reports that it was found by Mr. Dame in 1895 well established at Gibbs Swamp, where it was very common the following year coming in with the preceding species after an extensive brush fire. According to Mrs. Owen its introduction on the island was in or about the year 1855, when it was raised in a garden in Union Street, subsequently spreading into waste places.

First flowers July 6, 1912; blooming through September.

On the uninhabited southern extremity of Chappaquiddick Island, Marthas Vineyard, a single plant, still in flower, was found Sept. 28, 1912, growing with an abundance of *Chamaenerion angustifolium* in a grove of pines which had been swept by fire early in the same year.

* *EPILOBIUM PALUSTRE* L.

Rare and local; sphagnum bogs in Squam and west of Sankaty and near Reed Pond, also Tom Nevers Swamp. It appears to flower earlier than *Epilobium lineare*; mature fruit Aug. 13, 1908. Still some flowers Sept. 11, 1907. Collected at one station on Marthas Vineyard. This is the slender little bog plant that has been called var. *monticola* Haussk. Its variations are considerable, however, and take it into forms that are close to typical *palustre* as well as into others that nearly match specimens of var. *labradoricum* Haussk. It is from 1-2 dm. high, erect, often with decumbent base and sometimes stoloniferous, simple with a single terminal flower or well branched, the glabrate leaves numerous and closely ascending or more distant and spreading, sessile or petiolulate, 1-3 cm. long, 1-4 mm. wide, linear-lanceolate to oblanceolate or oval-oblong, either tapering or contracted to the rounded apex, thickish or rather thin; pedicels very slender, mostly elongated, sometimes longer than the pod, again only one quarter its length.

EPILOBIUM LINEARE Muhl.

Common in bogs. Plants six inches high June 27, 1912; first flowers Aug. 14, 1906; continues to bloom through September.

* **EPILOBIUM STRICTUM** Muhl.

Rare and local in bogs and wet mossy places in open ground. Watts Run bog, Shawaukemmo meadow, shore of Sachacha Pond—only a few plants at each locality. Plants 15 inches high June 15, 1908, and ten inches high July 1, 1912, but showing no flower buds; in flower and with mature fruit Sept. 19, 1899.

EPILOBIUM COLORATUM Muhl.

Rather common in low grounds or wet places. Plants several inches high June 28, 1912; observed in flower late in September.

* **EPILOBIUM ADENOCALON** Haussk.

Not rare, occurring in low grounds or damp thickets. Tom Nevers Pond and swamp, Taupawshas Swamp, Shimmo, Coskaty. Freshly in flower Aug. 7, 1906, in flower and with mature fruit Aug. 30, 1904, some flowers Sept. 19, 1899. Plants of pronounced character were collected in Tom Nevers swamp, the leaves 6–9 cm. long by 2–2.5 cm. broad. The flowers are commonly larger and much deeper in color than those of *Epilobium coloratum*.

OENOTHERA BIENNIS L.

Common in fields and open places, in thickets and woodland and as a weed in waste and in cultivated ground, flowering from midsummer through September. First flowers July 6, 1912. Its widely varying forms seem to hint at more than one species and appear to include crosses with *Oenothera muricata*. There are long pod forms and short pod forms that display marked contrasts. In the former the capsules are tapering linear and rather prominently quadrangular, becoming 4 cm. long and 4–5 mm. wide at the base; in the contrasted form they are commonly 2–3 cm. long and 5–7 mm. wide, less tapering and more abruptly contracted at the apex and with more rounded angles; in both forms the capsules may be either densely pubescent or glabrate. The flowers are commonly 4–5 cm. wide but are sometimes considerably smaller; the largest seen were 6.5 cm. wide on plants that after having been partly cut down had

recovered their growth. A form found on the eastern side of the island was noteworthy from the shiny and bright red-purple sparsely pubescent stem and branches which, with the subglabrate capsules, were viscid to the touch; the flowers and capsules were of medium size, the thin leaves lanceolate, with attenuate base and apex, the lowermost slender petioled.

* *OENOTHERA MURICATA* L.

Common, especially along shores, often in pure sand, but also in sandy and gravelly spots in all parts of the island. First flowers July 8, 1912; flowering through September.

Professor DeVries who, on his first visit to America, looked over some of my Nantucket and Long Island specimens of this *Oenothera* pronounced them to be essentially the same as the introduced American plant growing in Holland known to him as *O. muricata* L. Miss Vail has recorded (Carnegie Inst. Wash. Publ. No. 81: 74) that "*O. muricata* L. raised from seed received from Professor DeVries from the Holland sand dunes resembled these American plants but were not absolutely identical."

As compared with *O. biennis* this is a lower and more leafy-bracted plant with more numerous and ascending leaves of narrower form and thicker texture and less definitely repand denticulate, the lower with oblanceolate tendency; the general pubescence is softer, denser and more appressed, the longer hairs tending to form a villous or even pilose investiture especially on the capsules. In *O. biennis* the sparser pubescence is harsher and more or less hirsute, the smaller hairs mostly erect and incurved; the seeds are considerably smaller than those of *O. muricata*.

* *OENOTHERA STRIGOSA* (Rydb.) Mackenzie & Bush.

On June 19, 1910, many plants of this western species were found scattered through a once cultivated field on the Cabot farm in Shimmo valley; they were in full flower and a few bore capsules already 2 cm. in length. Specimens collected agree closely with the types of *O. strigosa* in the Herbarium of the New York Botanical Garden. Doctor Rydberg, who made the comparison with me, concurs in the determination. The plant seems to be new to our eastern flora and must be supposed to have been recently introduced. It was perhaps only transient at the Cabot farm

since it was not to be found there in June of the two years following its discovery. The plants, although well flowered and having stout roots, were unbranched and were rather contracted in habit as if repressed by some unfavorable condition of soil or surroundings. They were 2-4 dm. high, the simple stem sulcate, the crowded leaves rather undersized and erectly ascending, thickish and light green, the lowermost already turning purplish-red, pubescence dense and subappressed, of soft and somewhat silky hairs; flowers at first bright yellow becoming pinkish-red basally or throughout; petals 1.5-2.5 cm. long, 2.2-2.5 cm. wide, obovate, rounded or truncate; hypanthium 2-2.5 cm. long; flower buds abruptly narrowed or rounded to the apex; sepal tips very short. The earlier flowering period as compared with that of our native eastern species is especially to be noted.

Another closely allied *Oenothera*, *O. canovirens* Steele, described from Illinois (Contr. U. S. Nat. Herb. 13: 365. 1911), is not very different from this, but its longer hypanthium and longer sepal tips appear to be well marked distinctive characters, and other differences in the specimens I have seen lead me to think it a valid species. It is clearly not the same as *O. subulifera* Rydb. from Montana* which is also characterized by long sepal tips.

It may here be recorded that *O. canovirens* also occurs on the Atlantic seaboard. As long ago as Aug. 9, 1906, I collected it at Van Cortlandt, New York City, and put aside specimens under a manuscript name as a new species. These have been deposited in the herbarium of the New York Botanical Garden. My notes record that the flowers were not fragrant as were those of *O. biennis* with which it grew. A less densely pubescent form of *O. canovirens* was collected at Lynbrook, Long Island, July 3, 1910, growing along a new made roadway; the flowers were conspicuous from the reddish orange suffusion towards the base of the petals.

* *OENOTHERA OAKESIANA* Robbins.

Scarce; found only along a roadside northwest of the town and below the "Cliff." In flower and with small capsules Aug. 4, 1906; mature fruit Sept. 9, 1904. The Nantucket plant agrees closely with the plant of the Hempstead Plains, Long Island.

* Bull. Torrey Club 40: 66. 1913. *O. strigosa subulata* Rydb. Mem. N. Y. Bot. Gard. 1: 279. 1900.

specimens from both places were used by Doctor MacDougal in his "Mutation Studies," 1904.

* *Oenothera stenopetala* sp. nov.

Dwarf, 1-4 dm. high, erect, often geniculate at base, simple or sparingly branched, the branches ascending, often surpassing the main stem; root woody, slender and elongated, mostly simple or nearly so; stem pale brown, sometimes slightly reddened below when old, lignescent and terete below, the bark early splitting and exfoliating in thin strips; above, and the branches, somewhat angled decurrently from the insertions of the leaves, closely appressed canescent-puberulent, sometimes thinly short strigillose above. Leaves often erectly ascending, pale green, narrowly oblong to linear-oblong, 4-7 cm. long, 5-10 mm. wide, acute or subacute, the lower tapering into slender petioles, the uppermost and the bracts sessile with tapering base, or, even the bracts also, sometimes short petioled, entire or obscurely repand denticulate, on both surfaces finely white pubescent with appressed hairs; flower buds densely appressed strigillose and downy puberulent with gland tipped hairs; hypanthium very slender, 2-3 cm. long, glandular-puberulent; sepals 7-12 mm. long, glandular-puberulent and subpilose, the apical process subterminal, about 2 mm. long; petals narrowly linear, pale yellow, spreading, at length reflexed, puberulent on the outer surface and often slightly so within, 10-22 mm. long, 1.5-3 mm. wide; stamens longer than the style; filaments becoming 10 mm. long, anthers 3-4.5 mm. long; capsule tapering from the base or from above the middle to a narrowed apex, quadrangular with rounded angles, 2.5-3.2 cm. long, 5-7 mm. wide, when young whitened with a dense appressed subsericeous pubescence becoming appressed pubescent and slightly strigillose.

Type Aug. 15, 1906, in Herbarium New York Botanical Garden.

Found only along the sandy embankments of the railroad beyond the Orange Street crossing, where it was common in 1906 and 1907. In full flower and with some immature pods Aug. 5, 1906; still in flower, and with full sized pods Aug. 15; a few last flowers Sept. 11, 1907. On June 19, 1908, the larger plants were 3-4 inches high.

It is interesting to find that this plant was collected on Nantucket by Morong as long ago as Aug. 31, 1871, as evidenced by a flowering specimen in the Herbarium of the New York Botanical Garden labeled by Mr. Morong's hand "*Oenothera biennis* var.

parviflora." Others have also found the plant there, for Mr. Floyd's notes refer to collections as follows: Orange street, 1904, Mrs. Nellie F. Flynn; roadside near Maxcys Pond, 1905, Joseph R. Churchill, both determined as *O. cruciata* Nutt.

Notwithstanding the narrowly linear petals of this the smallest of our *Oenotheras* there can be little doubt that its real affinity is not with *O. cruciata*, a near relative of *O. biennis*, but rather with *O. Oakesiana* with which it agrees closely in pubescence and to some extent in the form of the capsule. *Oenothera cruciata*, which would be quite out of its known range on Nantucket, is an altogether larger and to an extent a glabrate species becoming thinly papillose hirsute with stiff spreading hairs. It differs throughout from the Nantucket plant; the bracts subtending the flowers are broad based, not narrowly tapering or petiolulate; the sepal tips are twice longer; the linear petals are materially shorter, never apparently becoming much more than half the length of the longest in *O. stenopetala*. As compared with *O. Oakesiana*, *O. stenopetala* is a much smaller plant; its pubescence although similar is less dense and canescent, sometimes taking an appressed strigillose character, especially on the broader based and shorter capsule; the cauline leaves are longer petioled and less sinuate or not at all so; the bracts are more narrowed to the base, the sepal tips much shorter and subterminal, the petals different beyond comparison.

An ambiguous *Oenothera*, which grew near *O. stenopetala*, seemed quite intermediate in pubescence and leaf characters between that species and *O. muricata* and appeared like a hybrid between them. The flowers were very small but with the petals quite as broad as long, mostly 10 mm. or less in length and breadth, a few as much as 15 mm. This plant is also suggestive of *O. Oakesiana* but the pubescence is coarser, the leaves more entire, the capsules stouter and less crowded and with more foliaceous bracts and the sepal tips are terminal and very short.

* *OENOTHERA LAMARCKIANA* DeVries.

Not *O. Lamarckiana* Seringe (1828). See Davis, Bull. Torrey Club 39: 519-533. *pl.* 37-39. 1912.

The occurrence of this now storied plant on Nantucket as an estray from cultivation has already been reported by MacDougal

(Carnegie Inst. Wash. Publ. No. 81: 6. 1907). It was found in August, 1904, in the neglected yard of a small house on lower Union Street, where it had spread among the grass and weeds and strayed outside the fence into an adjoining waste lot. Inquiry gained the information that a number of years before it had been raised from seed that had been given to the then occupant of the premises. It could be seen that the plant had spread naturally from two small and long undisturbed flower beds now almost obliterated by an incursion of weeds and grass. The specimens submitted to Doctor MacDougal were collected Aug. 29, 1904, bearing flowers and mature fruit. Other specimens were collected Aug. 15, 1906. In September, 1907, it was found that a general clearing up of the locality had almost exterminated the plant and a straggling individual in the yard and one in the adjoining lot were all that could be found. Subsequently, with further alterations in the surroundings, the plant had disappeared. But on a transient visit to Nantucket, Sept. 28, 1912, the same *Oenothera* in full flower was seen in almost complete possession of a small uncared for yard in a built up part of the town.

The flowers are remarkably showy, the petals bright golden yellow, the sepals deep purplish red in marked contrast. The largest corollas were 12.7 cm. across the expanded petals, the smallest less than half that size (6 cm.). No fragrance was perceptible. On bright days they open late in the afternoon closing in the forenoon of the following day. The capsules were 2.8–3.2 cm. long, papillate-hirsute, and glandular-puberulent with minute spreading hairs; seeds 1.5–2 mm. long, distinctly wing angled, wrinkled-lineate and rugulose.

Doctor MacDougal in his "Mutation Studies" of this species took seeds from the Nantucket specimens collected in 1904 and sowed them in sterilized soil in November of the same year. "On Jan. 27, 1904 [1905], 24 plantlets representing the widest diversity observable were transplanted to small pots in accordance with the usual practice. Six of these corresponded quite exactly to the mutant *O. albida* . . . all the other individuals developed in accordance with qualities of *O. Lamarckiana* with a maximum amount of color in the buds and also a maximum number of basal branches of some length" (Carnegie Inst. Wash. Publ. No. 81: 6. 1907).

* *KNEIFFIA PUMILA* (L.) Spach.

Not uncommon and actually widely scattered on the island, but very local. A few dried up plants were met with in September, 1899, below the "Cliff," where it was not seen again until June, 1910, when it was fairly common. It occurs also in meadows and low grounds in Squam towards Polpis; near the Polpis school-house; in the "Thorn Lot"; about a mile west of the town; at the Weweeder Ponds; the "Woods," at two stations, and by the Sheep Pond in the southwestern corner of the island.

Green buds only June 9, 1909; first flowers June 9, 1911; in full flower and with small pods June 15, 1910; still in bloom July 11, 1912.

Specimens from below the "Cliff," collected June 15, 1910, have reddened stems and flower buds and calyces of a bright purplish red. At all other localities the plants were without any obvious reddish tinge.

CIRCAEA LUTETIANA L.

Frequent in thickets on the eastern side of the island from Shawkemo to Squam and Coskaty. First flowers July 11, 1912; mature fruit Sept. 17, 1907; fruit mostly gone Sept. 20, 1907.

HALORAGIDACEAE

PROSERPINACA PALUSTRIS L.

Common in the borders of muddy ponds and in pools and ditches. Just in flower July 2, 1912.

MYRIOPHYLLUM TENELLUM Bigel.

In abundance along the muddy borders of a pond west of Madequet ditch, growing in exposed spots as well as among the cat-tails. In full flower July 10, 1912. Mrs. Owen has recorded that it was found by her in Cains Pond in 1858.

MYRIOPHYLLUM HUMILE (Raf.) Morong.

Common in ponds and pools or, where the water has receded, on drying mud. At Maxcys Pond, Sept. 12, 1907, the terrestrial form was abundantly in flower and fruit, the submersed form in fruit only, and very sparingly. On Sept. 10, 1899, the form with emersed spikes bore both fruit and flowers. In all three phases of

the plant the carpels, about 1.25 mm. long, were prominently tuberculate or minutely papillose-roughened, often with a smooth dorsal space between two indistinct ridges. Occurs on Tuckernuck.

ARALIACEAE

ARALIA NUDICAULIS L.

Not common and found only in the dense thickets on the eastern side of the island from Shimmo to Polpis, Pocomo and Squam; also at Tom Nevers Swamp, and on Tuckernuck. Just in flower June 2, 1909.

UMBELLIFERAE

HYDROCOTYLE UMBELLATA L.

One of the most common aquatics of Nantucket having found its way into almost all of the fresh water ponds and pools. Also on Tuckernuck. The floating leaves begin to appear by the end of May. In full flower and fruit through September.

* SANICULA MARYLANDICA L.

This is one of the plants of Nantucket that have been found only at a single spot. On July 4, 1912, I came upon a thriving colony of about fifteen plants hidden in the seclusion of a thicket in Squam not far east of Watts Run; they were in full flower and well set with young fruit. This species is frequent in the thickets of Chappaquiddick Island, Marthas Vineyard.

* SANICULA CANADENSIS L.

Also found only at a single station, and only one plant. It grew at the border of a thicket in Squam towards Wauwinet, Aug. 13, 1906, a well-fruited plant nearly 9 dm. high. It is scarcely to be doubted that other plants are to be found among the extensive and almost impenetrable thickets in that part of the island although I have not succeeded in rediscovering it. It occurs on Marthas Vineyard and I know of a single colony on Chappaquiddick Island.

* CONIUM MACULATUM L.

Occasional in waste ground about the wharves and in the outskirts of the town. Some plants were already nearly five feet tall June 4, 1911, the umbels still close and green. In full flower June 29, 1912.

* *PETROSELINUM HORTENSE* Hoffm.

A weed in a garden, 1897, Mrs. Nellie F. Flynn. Possibly merely persistent after cultivation. A specimen received from Mrs. Flynn was collected Aug. 16, bearing mature fruit.

* *CICUTA MACULATA* L.

Capaum Pond, May 30, 1909, a single tuft 14 inches high on the west side of the pond back of the beach. Not seen since. Met with at two localities on Marthas Vineyard.

* *CICUTA BULBIFERA* L.

Mrs. Nellie F. Flynn has sent me for examination a specimen of this species collected Aug. 18, 1899, in a ditch near Shawauk-emmo spring. It is a stout plant, 8.5 dm. tall, in full flower and bearing many clusters of young bulblets. Mrs. Flynn has now no recollection of having seen more than this one plant, the only one known ever to have been collected on Nantucket.

Sium CICUTAEFOLIUM Schrank.

Common about the borders of fresh water ponds and in swamps and ditches. The leaves are well developed at the end of May. First flowers July 11, 1912.

PTILIMNIUM CAPILLACEUM (Michx.) Raf.

Abundant in damp places in either fresh or brackish soils. The seedling plants become visible early in June and are in full flower and fruit in September.

* *AETHUSA CYNAPIUM* L.

Occasional about the wharves and by street sides in the town. On every visit to Nantucket I see it somewhere, but never more than a few plants, and usually at some new locality. Umbels showing white June 4, 1911; first flowers June 10, 1909; in full flower and fruit in September.

* *ANETHUM GRAVEOLENS* L.

Mrs. Flynn has sent me specimens of this plant collected by her from a large clump growing in a waste spot among the Scallop houses near the harbor shore.

LIGUSTICUM SCOTICUM L.

In abundance along the shores of Baches Harbor and Polpis Harbor and on the western side of the island at Great Neck and Little Neck. It also grows at the ice houses by Maxcys Pond where it has doubtless come in with eel grass taken from the sea shore. On the south side of the island it was seen only by Madequecham Pond, a single tuft. A dense cluster at Little Neck in 1904 was six feet across. No flowers observed up to the first week in July; fruit in all stages of maturity may be found early in September and flowers until late in the month. Locally common along the shores of Edgartown Harbor, Marthas Vineyard.

* CORIANDRUM SATIVUM L.

Well established through an abandoned weedy yard at the south end of the town; in full flower June 28, 1912.

* COELOPLEURUM ACTAEIFOLIUM (Michx.) Coult. & Rose.

At Wauwinet many plants of this stout umbellifer are scattered through the low bayberry thickets that clothe the bank above the harbor shore. They were in full flower July 11, 1912, and bore many umbels still undeveloped as well as others heavy with mature fruit. The largest plants were over four feet high. In the same thickets the cow parsnip (*Heracleum*) had long since flowered and was completely dried up. A single large plant of the *Coelopleurum* in flower and with young fruit was found at the border of a low field near the shore on Beach Street, June 6, 1911. It had doubtless been introduced there, more than probably from the Wauwinet locality some eight miles up the harbor. Nantucket seems to be the southernmost point to which this northern plant has made its way.

* PASTINACA SATIVA L.

A casual weed of fence borders and waste ground. It is of frequent occurrence by roadsides south of the town and about Milestone farm but is not often met with elsewhere; near Millbrook swamp Aug. 9, 1906. First flowers June 12, 1909, June 19, 1910.

HERACLEUM LANATUM Michx.

Common all along the harbor in the northeastern quarter of the island from Shimmo to Wauwinet, growing up among the shrubbery back of the beaches and in the shore thickets; too common and vigorous among the rarer native plants on Rattlesnake bank; Polpis; west of Sankaty. Tuckernuck. First flowers June 2, 1909; conspicuously in bloom June 7, 1908; a few last flowers June 29, 1912.

DAUCUS CAROTA L.

Very abundant, whitening fields and pastures through July, August and September. The green umbels begin to unfold about the middle of June and the flowers become noticeable early in July. First flowers June 26, 1910, June 27, 1912; umbels frequently pink.

CORNACEAE

CHAMAEPERICLYMENUM CANADENSE (L.) Asch. & Graebn.

Cornus canadensis L.

Rare, but abundant at one locality in Shawkemo near Quaise where in a damp shaded thicket it fairly carpets the ground; it occurs also, but sparingly, in a thicket in Polpis. First flowers June 4, 1909; in full flower June 7, 1908.

CYNOXYLON FLORIDA (L.) Raf.

Cornus florida L.

Not rare among the extensive thickets in Squam where I have come upon it at perhaps half a dozen stations, single trees or a few together, except in one instance where as many as thirty, most of them in poor condition, formed a close group. The trees are mostly well matured but not over ten or twelve feet high. At Beechwood in Polpis it is more numerous and of freer growth, the larger trees having attained a height of certainly 18-20 feet. I have seen it elsewhere on Nantucket only near the state road a mile or so west of Siasconset, where a dense thicket conceals a cluster of several old trunks of widespread branchment but not over 4-5 feet high, the lower branches nearly prostrate. At Beechwood it was in full flower June 12, 1909. A group of small trees was found on Tuckernuck, June 17, 1911.

* *CORNUS AMOMUM* Mill.

Fringing a brook along the north side of Trots swamp; a second locality is at Capaum Pond where there are several thick clusters near the shore on the west side of the pond. Cymes just appearing June 10, 1908; in full flower July 12, 1910; ripe fruit Sept. 12, 1907.

NYSSA SYLVATICA Marsh.

A common tree on the eastern side of the island, wanting over much of the western side; small trees grow on Coatue. Tuckernuck. It is ordinarily not taller than 8-10 feet, although trees 15 feet high are not uncommon; in Pocomo are groups of larger trees over twenty feet in height, and in Beechwood are some that are certainly not less than 30-35 feet high, equalling in height the tallest red maples. Probably there are no taller native trees anywhere on Nantucket. The trunks of these were not as thick as those of lower trees on Pocomo where the largest seen was 28 inches in circumference. A still stouter trunk of a not particularly tall tree in Quaise was 35 inches around one foot above the base. Coming into leaf June 3, 1909; anthers visible but not yet mature June 8, 1911, June 15, 1908; in full flower and with small green fruit June 20, 1910.